

REMARKS

I. REGARDING AMENDMENTS TO CLAIMS

Independent Claims 1, 12, and 33 have been revised herewith so as to more clearly distinguish the particular characteristics of the presently claimed invention as distinguished from the prior art, in conformance with the clear indication of the drawings and specification. In particular the inherent geometric relationship between undercut island segments, stems, and fenestrations is distinguished. Please see further discussion under section VI below. Therefore these claims are patentable in that they clearly denote a novel new device which is not obvious in view of the prior art.

Claims 6, 17, 24, and 35-43 are canceled as being drawn on other related inventions and as per Examiners prior division ruling. Applicant retains the option to reinstate these claims if and when it becomes proper to do so.

New Claims 56-59 are intended to claim the method of making as disclosed in the Drawings (Fig. 15 with respect to Claim 56; Fig. 16 with respect to Claim 57; Figs. 17 and 18 with regard to Claim 57; and Fig 18 with regard to Claim 58) and with the Specification (pages 23, paragraph 3 through page 27). In accordance with the directive of the Office Action of September 9, 2004, Claims 56-59 are readable on the Elected Species.

These new claims are patentable in that they describe a method of making a structure associated with all of the limitations of the of the claimed structure, in accordance with the examiners previous correspondence. See further discussion under section III below.

It should be noted that Claims 3-5, 7, 9, 11, 14-16, 18-23, 25-32, 48-49, and 52-54, which have been previously withdrawn from consideration by the Examiner, are not presently labeled as "withdrawn" in the foregoing listing of Amendments because applicant deems

PROPOSED AMENDMENT TO DRAWINGS

Delete: Figs. 6, 6A on Drawing Sheet 6/6

they should now be ready for consideration. Clarification regarding the application of MPEP article 714 regarding the labeling of claims in such instances is requested for applicant's future reference.

II. REGARDING AMENDMENTS TO SPECIFICATION

The specification has been amended by eliminating the priority reference as directed by the Examiner. Please see query under section IV below.

The specification has also been amended by eliminating the description of the chevron-like embodiment illustrated in Fig. 6.

III. REGARDING AMENDMENT TO DRAWINGS

Figs. 6 and 6A relating to chevron-like embodiment art eliminated.

IV. REGARDING ELECTION/ RESTRICTION

Claims 48 and 49 have been withdrawn by the Examiner for the reason cited in the Office Action of Sept. 9, 2004 and additionally for the reason stated in the Office Action of May 3, 2005. However, upon reconsideration of the previous objection in light of the recent Office Action, Applicant traverses the objection of the Sept. 9, 2004 OA regarding Claim 48 on the basis that the subject claim 48 clearly indicates that at least the second portion includes the limitations of the present invention regarding a fenestrated base structure having the characteristics taught in the specification. Therefore, at least such second portion would not have the unapertured base structure suggested by the Examiner.

Applicant also traverses the Examiner's current (May 3, 2005) withdrawal of the claims on the basis that the term "providing" as used in Claim 48 is intended in its "plain meaning" in accordance with MPEP 2111.01, i.e. "furnishing" or "procuring beforehand"; and is not intended to mean "producing" or "making" as apparently interpreted by the Examiner in regard to Claim 49.

Claim 49 is intended to describe a method of making the subject fastener portion having the limitations of the present invention for use by the method of Claim 48.

V. REGARDING PRIORITY/SPECIFICATION OBJECTIONS

The specification has been modified by eliminating the priority reference as directed by the Examiner. However, applicant requests clarification as to whether any form of reference to the rejected provisional applications is appropriate and if so in what form.

VI. REGARDING METHOD OF MAKING CLAIMS

It is applicants understanding of the present office action that claims # 49-55 as well as new claims # 56-59 are considered to be "method of making" claims and as such they will be considered upon allowance of the independent claims upon which they depend.

VII. REGARDING CLAIM REJECTIONS PER 35 USC article 103(a)

The Office Action has rejected Claims 1, 2, 8, 12, 13, 33, 34, 44, 45, 47, 50, 51, and 55 under USC35 103 (a) as being unpatentable over Duffy 5983467 (Duffy 1) in view of Allan 5640744. Examiner alleges that combining Allan's use of fenestrations for sewing with Duffy 1's inclusion of sewing as a means for attachment would have been obvious to one having ordinary skill in the art in that "one having ordinary skill in the art would readily recognize the use of apertures for attachment [by sewing]".

Applicant's present invention, in general terms, teaches "Improved Slidingly Engaging Fasteners" having three dimensionally shaped fastening elements integral with a fenestrated base structure having a particular geometric relationship to such elements(Figs 1-18). The invention also includes methods of attachment, but does not include sewing by the means suggested by the examiner.

Applicant's prior invention, US 5983467 (Duffy 1), generally teaches a slidingly engaged "Interlocking Device" wherein fastening elements are generally integral with a contiguous sheet form base. Duffy 1 also teaches means for attachment including sewing.

Allan, US 5640744, generally teaches a compressively engaged "Nested Ridge Strap Connector" comprising longitudinal columns of laterally configured interdigitating ridges and slots within a strap like structure.

Applicant traverses the Office Action on the following grounds:

1. The invention as a whole has not been considered.

MPEP 2141.02 states "The Claimed Invention as a Whole Must be Considered", in particular, the "disclosed inherent properties are part of 'as a whole' inquiry". Furthermore, in accordance with MPEP 2141.02, "Distilling the invention down to a 'gist' or 'thrust' of an invention disregards 'as a whole' requirement".

In concluding a case for obviousness based on the Examiner's suggestion that fenestrations would be useful for sewing the invention of Duffy 1, the Examiner does not appear to have considered either the present invention or the referenced prior art as a whole.

Applicant's present invention, in general terms as seen in Figs 1-18, comprises Improved Slidingly Engaging Fasteners having a plurality of undercut segments with stems connecting such segments to a common fenestrated base structure, resulting in an integral structural matrix. The device is actuated by interspersing and slidingly engaging such undercut islands into complementary apertures defined at least in part by the undercut surface segments of the islands and the stems of a complementary portion by application of a relative shearing force.

As is apparent throughout the application, an inherent aspect of this invention which differentiates it significantly from applicant's prior US patent #5983467 (Duffy 1) and other prior art, is the intrinsic geometric and structural relationship of the fenestrated base structure, undercut island segments, and connecting stems which in combination result in the unique structural matrix which is integral to the invention as a whole. As summarized on page 9, paragraph 2, as specified in greater detail on page 14, paragraph 1-2, and elsewhere throughout the specification and drawings (Figs. 1-18) "At least a portion of the fenestrations [*"the subject fenestrations" as used hereafter*] are correspondent, in a direction generally perpendicular to the plane of the base structure, with corresponding undersides of the islands, and the solid segments of such base structure are generally contiguous with the stem portions of such islands". Furthermore, "... stems 07 are generally located between said undercut segments, and vice versa so as to effect an island having a top surface 05 with a segmented edge 06" (page 14, line 19-21).

In keeping with the objectives of the invention and as noted throughout the specification, the present device with its integral fenestrated structure in accordance with the specification and drawings provides a number of important functional advantages and significant improvements over the device of Duffy 1 as well as other prior art. Among the attributes of the present invention intrinsically related to the fenestrated structure are the following:

- a. Material is utilized efficiently and economically (page 3 line 14; pg.9, line 4)
- b. Flexibility of the fastening members is greatly enhanced (page 9, line 5);
- c. A diversity of designs for a variety of application parameters may be provided (pg. 9, line 6);
- d. Portions may be readily cleaned and will extract debris, dirt, snow, etc. through the fenestrations as the members are engaged (pg. 9, line 8-10);

- e. Double sided fastener portions may be economically produced (pg. 9, line 8);
- f. Portions of such a fastening system may be integrally molded or formed as part of a larger product component (pg. 9, line 10);
- g. The device may be economically produced in large volume by means of a relatively simple bypassing die set (page 9, line 1);
- h. Economical production may be achieved by diverse means including molding and die forming (page 9, line 2);

New and Unexpected Results

- i. Although enhanced flexibility, as noted above, was a stated objective of the invention, a new and unexpected additional result has also been the ability of engaged portions to withstand significant torsional flex without disengagement. (See attached image 1).
- j. Additionally, in that the desirability of enhanced elasticity is taught with regard to a strap like application (Fig. 10; page 21, paragraph 2 (revised 6/10/2004)), in field tests conducted since the present application was filed, it has been observed that the fenestrated aspect of the device also greatly enhances the invention's function and ease of use in regard to elasticity. Because the fenestrated structural matrix tends to elongate when subjected to a shearing force, the structure's inherent longitudinal elasticity is significantly greater than anticipated, another new and unexpected result. Therefore, one or both portions of a strap-like embodiment similar to that shown in Fig. 10 (with or without the optional elastic segment 46) may be overstretched before engagement so as to assure fit at a desired tension. This has proven to be particularly useful in field-tested applications including snowshoe bindings, helmet straps, watch bands, hose and

wire wraps, wrist straps and other bundling and wrapping applications as also noted below. (See attached Image 2)

k. Another significant new and unexpected result has been the invention's inherent potential for medical applications. A proposed "Unitary Orthopedic Appliance" based on the present technology was recently named Grand Prize winner in the Emhart/NASA Tech Briefs "Create the Future" contest. Among the benefits noted by the judges which are inherent to the current invention were: the open fenestrated structure which allows skin to breath, perspire and dry; intrinsic hygienic design and cleanability; durability; intuitive usability; integral manufacturing of fastener with appliance; economy; and ease of manufacture. (See Attachment #1)

l. Since the aforementioned award, the invention has also been cited by others for its potential in expediting wound care because of the fenestrated structure, such as in hyperbaric conditions where oxygen may be directed through the structure and a light dressing to the skin. Other medical uses are also under consideration.

Consideration of the invention "as a whole" must include consideration the foregoing objectives as well as the structure and principle of operation. Effectively, the present invention provides a unique structural entity for achieving the objectives above which integrates the individual fastening elements, islands and apertures, within a common 3-dimensional structural matrix. This aspect differentiates the invention significantly from both Duffy 1, wherein the fastening elements are associated with an effectively continuous sheet form base, and Allan, wherein the fastening elements are associated with a structural entity which effectively surrounds the elements in a generally coplanar disposition.

The invention as a whole includes the inherent relationship of segmented islands, stems, and fenestrated base structure.

The invention "as a whole" includes unique aspects which clearly distinguish it from the referenced prior art. For example, the Drawings (Figs. 1-5, 7-10) and specification clearly indicate that the individual island fastening elements include distinct segments with undersides which are generally located between distinct stem segments (or stem segment portions) connecting the islands to the fenestrated base structure (page 14, line 19). It is the integral relationship of this unique structural attribute, the fenestrated base structure, and the slidingly engaging principle of operation which at least in part clearly distinguishes the present invention.

The specification clearly distinguishes between the subject fenestrated base structure and other "common expedient" fenestrations such as for sewing.

As noted above, the presently claimed fenestrated base structure, as taught throughout the application (Figs 1-18), provides a number of advantages over Prior Art including Duffy 1, which would not have been recognized by one having ordinary skill in the art at the time the invention was made. The claimed invention teaches these particular fenestrations as being specific as to their shape, size, and location in accordance to their relationship with the undercut segments of islands and stems (Figs. 1-8, 10; specification page 9, line 17 and throughout).

The specification clearly notes that other fenestrations may be optionally included within the scope of the invention for common expedients such as for the Examiner's suggested sewing (page 9, line 23-24); "The fenestrated base structure may also include larger fenestrations as well as other openings or surface features designed for functional or aesthetic effect". It is, of course, possible and often desirable to provide additional fenestrations for sundry purposes and it is a common expedient in many fields to provide a structure with fenestrations of diverse shape or size for such various purposes including sewing. However, such other "common expedient" fenestrations, while not precluded as an option, are not included in the presently claimed invention. Therefore, it is important

to note that the subject "fenestrated base structure", as an integral element of the present invention, is differentiated from other optional "common expedient" fenestrations which may also be included for sewing or other purposes.

The disclosed inherent properties are part of the "Invention as a Whole".

As discussed above, the inherent properties related to the integral fenestrated structure are essential to achieving the stated functional objectives of the invention. Furthermore, in looking at the invention as a whole, it is apparent that the integral fenestrated base structure is fundamental to the method of manufacture disclosed in Figs. 11-18 and specified primarily on pages 21-27 and elsewhere. Although the claims based on such method of manufacture have previously been disallowed by the Examiner on the basis of Division, the teaching of this method, relative to the fenestrated structure in question represents a significant aspect of the invention "when considered as a whole" (eight of 18 figures and six of 27 pages) as relevant to the applicant's objectives referenced above including economical utilization of materials, flexibility, cleanability, hygienic qualities, potential for economical production, integrated manufacturability, as well as the other benefits of the fenestrated structure, regardless of the method of manufacture.

Use of the subject fenestrations for sewing are not suggested or taught.

It is important to emphasize that the present invention as a whole does not support the notion that the subject fenestrations are provided for sewing (or for other means of attachment) in the manner suggested by the examiner. It is important to emphasize that sewing through the claimed fenestrated base, though not precluded within the scope of the invention, is not taught, suggested or recommended by the applicant. Nowhere is there mention or suggestion of sewing in the manner suggested by the examiner through the subject fenestrations as an essential, non-essential, or desirable aspect of the present invention.

Therefore it can be seen that the present invention when considered "as a whole", including its unique fenestrated base, segmented islands and stems with integral geometric relationship to the whole, includes numerous attributes which would not have been recognized by one of ordinary skill in the art at the time the invention was made.

2. The referenced prior art as a whole has not been fully considered

MPEP 2141.02 states that "Prior Art Must be Considered in its Entirety, Including Disclosures that Teach away from the Claims", and *Graham v. John Deer Co.* requires that the scope and contents of the prior art be determined. In concluding that combining Allan's fenestrations with Duffy 1's "contiguous (sheet form) base" as an expedient for sewing, the examiner appears to not have considered the full scope and contents of the prior art.

Duffy 1 (US 5983467) teaches an Interlocking Device which is actuated by slidingly engaging (by application of a relative shearing force) a plurality of generally three-dimensionally tapered islands with sidewalls, protruding from a generally contiguous (sheet form) basal surface, within a plurality of apertures defined by the generally contiguous base and walls coincident with the sidewalls of the islands of a complementary portion (page 7, lines 37-52). As seen throughout the drawings, the referenced sidewalls/walls are typically contiguous with the generally contiguous basal surface. Although in most embodiments the sidewalls/walls are typically illustrated as tapered from the base, in other embodiments such as those of Figs. 6 and 9 with more of an "OG" profile, a relatively distinct underside segment can be seen. In each case, however, the walls/sidewalls extend from and are contiguous with the basal surface and the effective edge of each island is generally continuous.

Therefore, it is apparent that the contiguous base is an inherent aspect of the patented invention. Although, in hindsight in view of the present invention, it has become apparent that it is not necessary for a slidingly engaging fastener to have such a generally

contiguous base structure, the fact that an alternative configuration without such a contiguous base was possible was not recognized at the time by either the applicant or by others in the field and such a configuration is inherently dependent on other aspects of the present invention, especially the inclusion of segmented islands and stems not taught in Duffy 1. It is important to note that, in addition to the contiguous base, Duffy 1 teaches islands which are generally of a relatively simple geometric shape and have a generally contiguous top surface, without segmentation of the edge, and which are also typically contiguous with the sidewalls rather than with distinct stem segments located between undercut segments.

Duffy 1 includes fenestrations for common expedients such as sewing

Duffy 1 teaches several common means for attaching the device to a substrate which involve perforating or otherwise forming fenestrations in the base structure including stapling(Fig. 9), riveting(Fig. 10), and sewing(Fig. 5, page 12, line 8-13). It should be noted that the latter case, sewing, is taught with regard to a specific geometric placement specified for the tufted threads so as to also serve as a coupling device (page 11, ln. 56-63;page 12, ln. 8-11; page 13, ln.57-67). Although not specifically noted in the specification, holes for sewing are implied as a common expedient in that the act of sewing typically includes perforating a surface with a needle attached to the sewing thread. Therefore when considered "as a whole" Duffy 1 clearly teaches a complete fastening device with a unique contiguous structure and means for attachment which is distinct from both Allan and the present invention.

There is no teaching, suggestion, or motivation implied within the disclosure of Duffy 1 that would suggest to one of ordinary skill in the art at the time the invention was made that it should or could be combined with Allan in the manner suggested by the Examiner.

Allan teaches a fastening device incorporating a distinctly different structure and operating principle than either Duffy 1 or the present invention

Allan, US 5640744, teaches a Nested Ridge Strap Connector which appears to be actuated by engaging a plurality of ridges running generally perpendicular to the length of a strap into a plurality of complementary slots separating a like plurality of such ridges on a complementary portion by application of a relative compressive force. It should be noted that Allan's ridges appear to be at least partially engaged within the confines of his slots (that is, within the walls of the slots which are generally perpendicular to the structural surfaces) (Figs. 1C, 2, 3, 4, 8, 9, 15, 24, 26, 35, and others so implying). The straps appear to be laterally aligned by confining the ridges of one portion between longitudinal ribs of its complementary portion. Allan also describes sewing shoulders as a means of attachment, a common expedient. Allan's compressive principle of operation as well as his structure of ribs attached at their ends to longitudinal strap segments are clearly inherent aspects of his invention. Therefore when considered "as a whole", Allan clearly teaches a device which is distinct in both form and principle of operation from both Duffy 1 And the present invention.

There is no teaching, suggestion, or motivation implied within the disclosure of Allan that would suggest to one of ordinary skill in the art at the time the invention was made that it should or could be combined with Duffy 1 in the manner suggested by the Examiner.

Therefore it is apparent, when they are considered as a whole, that neither Duffy 1 or Allan teach or suggest the subject fenestrations or segmented undersides associated with adjacent stems which result in the unique configuration and results of the present invention.

3. The references take different and mutually exclusive approaches and arrive at different complete solutions to solve a similar problem

Although Duffy 1 and Allan appear to both set about to solve at least some common fastening problems, their definition of the problem, approaches, and proposed mechanisms teach in quite opposite directions. For example:

Whereas Allan effectively defines the problem as replacing existing types of straps and laces, Duffy 1 defines the problem as replacing a variety of edge, strap and two dimensional surface fasteners.

Whereas Allan incorporates a system engaged by a relative compressive force, Duffy 1's device is engaged by a relative shearing force.

Whereas Allan utilizes rows of interdigitating ridges and slots arrayed perpendicular to the presumed direction of shear, Duffy 1 utilizes two-dimensional arrays of islands and adjacent apertures configured in a generally tapered angular relationship.

Whereas Allan includes a common structure which generally surrounds the individual fastening elements in an effectively coplanar relationship (i.e. fastening elements are located in a zone within the overall strap), Duffy 1 includes a contiguous common base structure from which fastening elements effectively protrude.

Whereas Allan teaches ridges which effectively penetrate into and through a fenestrated base structure, Duffy 1 teaches fastening elements which are effectively located in a zone parallel with and adjacent to a contiguous base structure.

Whereas Allan teaches a strap-like device with distinct portions (one with longitudinal ribs 17), Duffy 1 teaches a generally hermaphroditic surface fastener which can be configured for surface, edge, or strap-like applications.

Whereas Allan includes attachment methods which include sewing through the primary fenestrations of the base structure, Duffy 1 includes a variety of attachment devices including sewing through a sheet form base at specific locations.

Therefore, in consideration of the above as well as the numerous other differences found throughout the references, it is clear that that the references take mutually exclusive approaches and arrive at distinct compete solutions.

4. **The references are individually complete and functional in themselves, so there would be no reason to substitute parts from one to the other**

In accordance with MPEP 2144.04 VI,C quoting *Exparte Chicago Rawhide Mfg. Co.* "...prior art must provide a motivation or reason ...to make the necessary changes in the reference device".

Duffy 1 and Allan each individually teach mechanism which appear to be complete and functional in and of themselves utilizing quite different principles and methods of operation as discussed fully above and seen throughout the references. Furthermore, the inventions teach very distinct means of activation, function, and attachment to substrates.

Duffy 1 teaches a complete and functional fastening mechanism which includes a means for sewing its contiguous sheet form base to a substrate (Fig. 5) as well as other means for attachment (Figs. 10, 11, 18, 20). Therefore there would be no motivation to combine the invention with the larger slot-like fenestrations of Allan for such purpose.

Additionally, Duffy 1 teaches a unique and complete fastening principal utilizing a plurality of islands and corresponding apertures activated by a relative shearing force.

Allan also teaches a complete and apparently functional fastening mechanism with means for attaching his straps to a substrate. Allan also teaches a unique and complete fastening principle utilizing interdigitating ribs and slots activated by a relative compressive force.

Therefore, in considering each referenced invention as a whole, in that Duffy 1 teaches incidental "common expedient" fenestrations through the contiguous base as specified or clearly implied, and in that Allan teaches a complete fastening system utilizing a distinct principle of operation, there would be no motivation for one of ordinary skill in

the art to combine the references for the purpose suggested by the Examiner, or for other reason --- if such a combination could be made.

5. The references individually teach away from one another

As discussed above, the references each teach distinct inventions which are complete in and of themselves which include no suggestion or implication that they should be combined. Furthermore the references clearly teach away from each other as well as from their combination.

Whereas Duffy 1 teaches a slidingly engaging fastener comprised of an array of islands effectively spaced from a surface so as to define a three dimensional aperture, Allan teaches a series of parallel ribs which are inserted into slots extending through a strap-like structure. In the first instance, Duffy 1, the effective operating mechanism is the sliding engagement of islands in a direction generally parallel with the sheet form base structure by a relative shearing force. In the second instance, Allan, the effective operating mechanism is the interdigitation of alternating ribs and slots in a direction generally perpendicular to and through the structure by a relative compressive force. Therefore two very distinct operational principals to solve certain (but not all) common problems are provided.

Whereas Duffy 1 teaches a plurality of fastening elements extending perpendicularly from and contiguous with an effectively sheet form base, Allan teaches an array of slots and ridges which are surrounded by a contiguous structure effectively coplanar with the slots.

Whereas Duffy 1 teaches apertures with a generally tapered aspect allowing individual islands to self-align and preventing lateral displacement (among other reasons), Allan provides longitudinal ribs 17 on one portion intended to laterally align both portions.

Whereas Duffy 1 teaches apertures which effectively contain corresponding islands in a location above the structural base (i.e. the engagement zone is effectively sandwiched between base structures), Allan teaches slots extending through the base for engaging ribs which extend into such slots (i.e. interengaging elements extending into or through an fenestrated base structure in which the fenestrations are actually receivers for the male fastening ridges).

Whereas Duffy 1 teaches a two-dimensional array of fastening elements on a sheet form base which can be oriented longitudinally, laterally or as a two dimensional field; Allan teaches a generally one-dimensional strap-like fastener comprised of distinct longitudinal rows of fastening elements.

Whereas Duffy 1 teaches a system which is adjustable laterally or longitudinally; Allan teaches adjustment only in a longitudinal direction.

Whereas Duffy 1 teaches a fastening device which can resist torsional distortion; Allan teaches a fastening strap which would appear to disengage when subjected to torsional stress.

Whereas Duffy 1 teaches generally hermaphroditic portions each having self-aligning islands and corresponding apertures; Allan teaches distinct portions having ridges and slots which much be aligned relatively precisely in a longitudinal direction (by parallel ribs 17 on one portion).

Therefore the references clearly teach away from each other and can not be legally combined.

6. The references individually teach away from the proposed combination

In accordance with MPEP 2142, "Some suggestion or motivation in the references themselves or knowledge generally available [must be present] to modify or combine the

references". As discussed above, the references each teach away from one another as well as away from the present invention.

Whereas the present invention teaches a plurality of fastening elements integrated with an open fenestrated structure, Duffy 1 teaches a plurality of fastening elements extending from and generally contiguous with a contiguous sheet form base.

Whereas the present invention teaches a plurality of islands and receiving apertures engaged by a relative shearing force, Allan teaches a plurality of parallel ribs and slots engaged by a relative compressive force.

Whereas the present invention teaches a plurality of segmented islands with distinct undercut segments, stems and undercut segments (Figs 1-5, 6-10), Duffy 1 teaches unsegmented islands of generally simple geometric shapes with generally contiguous sidewalls extending from the base to island top surface.

Whereas the present invention teaches several specific means of attachment (Figs. 8-9) which do not include sewing through the base structure within the fastening zone, Duffy 1 teaches attachment methods which include sewing through the sheet form base at specific locations (Fig. 5).

Therefore the references each clearly teach away from the proposed combination as well as from the present invention.

7. There is no teaching, suggestion or motivation in the present invention which would imply the proposed combination for the purpose proposed by the examiner.

As previously noted, the present application includes no teaching, suggestion or implication that the subject fenestrations are provided for the purpose of sewing. The application however, does teach several other proposed optional means for attachment to a substrate as seen in Figs. 8 and 9 and specified on page 20. Although sewing is also

mentioned as a possible means of attachment (page 10, line 22), such sewing is presumed to be accomplished through additional commonly provided fenestrations for such purpose in a selvage area or flange, in a designated sewing area, or along the perimeter of the fastening zone: not within the operating zone of the fastener as suggested by the examiner. Furthermore, using the designated fenestrations for the purpose of sewing in a configuration as in Allan's Fig. 21 would in fact not be an effective means of attachment in that: a) The exposed threads would encroach upon the necessary aperture space, preventing or retarding effective engagement and disengagement; and b) The threads would be placed in a location where they would be subject to excessive wear.

Therefore the Office Action's proposal to combine specific aspects of the inventions for the suggested purpose of sewing is not valid because sewing in the manner proposed is not included in the present invention. No motivation for such combination is present in either the prior art or the present invention.

8. The Examiner's proposed combination is not taught, suggested, or implied by the prior art.

MPEP 706.02 (j) states that the references "...must contain suggestion or motivation..."

MPEP 2142, states "Some suggestion or motivation in the references themselves or knowledge generally available [must be present] to modify or combine the references".

MPEP 2143.01 also states, "The mere fact that the references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination".

There is no teaching or suggestion included in the slidingly engaging interlocking device of Duffy 1 that would suggest that the invention be combined with the slot and rib mechanism of Allan. If such a combination were attempted, that is the islands of Duffy 1 were to be inserted into apertures within an apertured base structure as in Allan an unworkable combination would result.

There is no teaching in Allan that would suggest that his device should or could be combined with Duffy 1.

The wisdom of the field does not suggest any such combination and in fact generally teaches away from any such combination (see below).

Thus, the present invention, as noted thoroughly above, teaches a device which is both distinct from Duffy 1 in its structure and distinct from Allan in its operating principal.

9. Neither the references nor the present invention teach what the examiner relies upon as supposedly teaching.

MPEP 2143 requires that "The teaching of suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not applicants disclosure.

In concluding that his proposed combination would be obvious to one of ordinary skill in the art, the examiner appears to have not fully considered the teachings of the references or the present invention.

In that Duffy 1 clearly includes incidental fenestrations for the purpose of sewing (implied by the act of sewing, Fig. 5) as well as for other means of attachment (Figs. 9, 10, 17, 18, 20), there would be no reason to combine that invention with the slots provided by Allan.

In that Allan clearly teaches an operating principle and mechanism which appears to be complete, there would be no reason to combine his invention with that of Duffy 1.

In that Allan clearly teaches a plurality of ribs and slots connected and surrounded by a contiguous structural entity, and Duffy 1 teaches a plurality of fastening elements

associated with a contiguous common base, neither invention includes the distinct undercut segments, stems, and subject fenestrations essential to the integrated structural matrix of the present invention.

In that the present invention includes provisions for attachment as well as for "common expedient" fenestrations for diverse other purposes including sewing, there would be no reason to combine the references in the manner suggested. While sewing through fenestrations of the claimed type, or of other common expedient types, at a location remote from the fastening zone is certainly possible, utilizing such means should be considered incidental to the claimed invention when considered as a whole.

In that the present invention does not include sewing through the presently claimed fenestrations as a recommended means of attachment, there would be no reason for one of ordinary skill in the art to make the suggested combination. It is important to reemphasize that, although the application teaches several means for attaching a fastener portion to a substrate, it does not propose use of the subject fenestrations as means for attaching a fastening portion to a substrate by sewing.

Applicant does not disagree that "apertures in the base is a common expedient for attachment". However, as previously noted, the present invention teaches that such apertures or fenestrations for purposes of attachment such as sewing may be provided within the scope of the invention, whereas the particular configuration of the presently claimed fenestrated base is an integral aspect of the invention .

Thus, there would be no reason to combine or substitute parts of one reference to the other, nor is any reasonable expectation of success for such a combination found in the prior art.

- 10. The proposed combination for the purpose cited would result in an inoperative combination.**

MPEP 706.02(j) requires that the references contain both teaching and suggestion as well as a "reasonable expectation of success".

As discussed above, if such a combination could be made, exposed threads within the subject fenestrations of the present invention would retard sliding engagement and would be subject to excessive wear when engagement is attempted, thereby making the present invention effectively inoperative or less optimally operative at best.

More significantly however, merely combining the fenestrations of Allan with the interlocking device of Duffy 1, as proposed by the Examiner, without also including at least the aspects of perpendicularly aligned undersides with fenestrations, segmented islands, and stems which are essential to providing the present structure and which are not taught in the references, would result in an inoperative combination wherein: a) a sheet form base is merely perforated for sewing between island peripheries so as to not resemble the present invention in form or function; b) floating islands are unattached to a common structural base; or c) islands are somehow connected to a common structure at their periphery (as in Allan) by means which can not be conceived without consideration of the present invention. It is apparent that combining the references as suggested in the OA by merely fenestrating the contiguous base of Duffy 1 (a above) would result in a device with relatively less material efficiency, less flexibility, less ability to extract extraneous materials when engaged, and without the inherent cleanability, ease of manufacturability, and other attributes contributing to the stated objectives of the present invention. It is also apparent that other combinations (such as b or c) would not function.

Therefore the Examiner's proposed would result in an inoperative combination.

11. It would be necessary to make modifications not taught in the prior art in order to combine the references in the manner suggested

MPEP 2142 requires "...a reasonable expectation of success" in combining references.

In that neither reference includes any teaching relative to the essential present integral structural matrix having distinct stems and undercut segments as well as the subject fenestrations, it would be necessary to significantly modify Duffy 1, Allan or both in order to come up with the Examiner's proposal in any form resembling the present invention. Therefore, the islands of relatively simple geometric shape taught by Duffy 1 would have to be segmented with stem segments added between undercut segments, or some other significant but presently unimagined modification would be necessary.

Furthermore, if the foregoing were to be overcome, because Duffy 1 clearly includes complete means for sewing and otherwise attaching the device to a substrate, it would be necessary to make modifications which are not taught in the invention to combine the references in the manner suggested: i.e. to make fenestrations within the operating zone of the fastening mechanism. As previously discussed, such a modification for the purpose of sewing would require that the geometry of the device be significantly altered so that the threads do not interfere with the operation of the sliding engagement mechanism and so that the threads are not unduly worn. *Because Allan also clearly includes a complete fastening device operating on a distinct principle and mechanism, combining his system with that of Duffy 1 would require modification of both the mechanism and operating principle in ways not taught in the prior art in order to combine the references in the manner suggested.*

- 12. The references can't be legally combined because they take mutually exclusive paths to reach different solutions to a problem and therefore by implication teach away from each other.**

See discussion above in responses 2-11.

- 13. Even if combined in the manner suggested by the Examiner the references would not meet the claims.**

MPEP 2141.02 states that "Prior Art Must be Considered in its Entirety, Including Disclosures that Teach away from the Claims". MPEP 2143.03 requires that all claim limitations must be taught or suggested in the references. MPEP 2142 states "the prior art references when combined must teach or suggest all of the claim limitations" and "the teaching or suggestion to make the claimed combination must found in the prior art , not based on applicant's disclosure".

As previously discussed, merely combining Allan's fenestrations with Duffy1's interlocking device would appear to result in either a sheet form base simply perforated for sewing, a plurality of floating unconnected islands, or some presently inconceivable structure connecting the outer limits of islands to a contiguous surrounding structure as per Allan. If viewed without the benefit of hindsight afforded by the present invention, the combination proposed by the Examiner can not be conceived without also incorporating the integral segmented islands and interjacent stems resultant of the present structural matrix.

Whereas at least independent Claims 1, 12, 19, 25, 33, 34 and 44 include undercut island segments spaced from a fenestrated basal surface and connected to the base structure by stems, as thoroughly taught throughout the specification, (Page 9, paragraph 2; page 14 paragraphs 1,-2) so as to effectively provide an integrated structural entity, combining the references in the manner suggested by the Examiner would not meet the limitations of the claims.

Therefore, even if the references could be combined according to the Examiner's proposal, the combination would not meet the limitations of the claims.

14. Those skilled in the art at the time the invention was made would have no reason to combine the references and the wisdom of the field teaches away from the proposed combination

MPEP 706.02 (j) requires a suggestion or motivation in the references or in knowledge generally available. MPEP 2141.03 states that "References which do not qualify as prior art... may be relied upon to show the level of ordinary skill in the art at or around the time the invention was made".

Regarding the time that the Invention Was Made

The applicant's provisional patent applications referenced in paragraph one of the specification have been rejected relative to priority date based on previously discussed format irregularities. However, in that the provisional application dated 10/19/2000 disclosed the invention as inclusive of the presently subject fenestrations aligned with undercuts, such application would appear to be prima facie evidence of a date of invention no later than October 19, 2000 as being the latest time that the invention was made. Therefore, a relatively narrow window of opportunity is seen to have existed for one of ordinary skill in the field to find the subject combination obvious. (Applicant has evidence of an earlier date of invention).

Regarding the Knowledge of One of Ordinary Skill in the Field at the Time the Invention Was Made

According to the USPTO on-line data base, a total of 52 issued patents and one pending applications in US classification 24/442 were filed between July 1998 (immediately after publication of Duffy 1 application) and October 19, 2000. A significant portion of those disclosures were assigned to companies including Aplix, 3M Corp., Kimberly-Clark, YKK, and Velcro; all leaders in the field, presumably with teams of well trained engineers who frequently contribute important advances in the field. Yet, of all these documents (as well as published filings reviewed by the applicant since that time period), none teach or suggest combining any aspect of Duffy 1 and Allan. Thus it is apparent that those with ordinary knowledge in the field at the time the invention was made have failed to find the proposed combination obvious. Although applicant recognizes that the

above observation does not constitute a definitive finding on the matter at hand it is offered as evidence of the prevailing wisdom in the field.

The wisdom of the field teaches away from the proposed combination.

It should be noted that the technology included in US 24/442 generally includes numerous products having pluralities of undercut fastening elements which might be beneficially enhanced by incorporating the unique fenestrated structure of the present invention. However there does not appear to be any instance within the relevant time period wherein such aspect has been utilized. It is evident from consideration of the above that the accepted wisdom in the art, at the time of the invention and since, regarding fastening systems incorporating multiple undercut elements is that such elements are generally associated with a contiguous sheet form base. The few exceptions, such as Allan, generally teach alternative operating principles with other inherent functional limitations.

As previously discussed, because both Allan and Duffy 1 teach complete inventions with distinct structural and operating principles which are alternative solutions to at least some common fastening problems, and because each incorporate complete means for attaching such devices to a substrate, there would be no reason, motivation, or incentive for one of ordinary skill in the art at the time the invention was made to combine the references in the manner proposed by the Examiner or for other reason.

Therefore it is apparent that those skilled in the art at the time the invention was made would have no reason to combine the references and the wisdom of the art teaches away from such a combination.

15. Up to now those skilled in the art were skeptical that the techniques used in the invention were workable.

As discussed above, it is apparent that up to now those skilled in the art, if they might have considered a solution similar to the present invention, were skeptical that the techniques used in the invention were workable. For instance, two examples of prior art discussed in the present application (page 5, line 23-page 6, line 12) Kaneko US5212853 (1993) and Kayaki US 5067210 (1991) each teach a fenestrated base as related respectively to hook-and-loop and mushroom-type fasteners. It is apparent that these inventions teach away from generally accepted manufacturing methods. ***In that disclosures published since that time period have not incorporated the unique structural aspect of the present invention is significant evidence that those skilled in the art have considered such techniques to be unworkable.***

16. Up to now those skilled in the art thought the problem solved by the invention to be insoluble.

The inherent advantages of the present invention in solving at least several problems common to surface-type fasteners, including enhanced flexibility, cleanability, efficient utilization of materials, economical production, and other benefits, would appear to be beneficial attributes applicable to a number of different types of fastening devices within US Class 24/442. ***However, the fact that others have failed to either identify the problems or incorporate aspects of the present invention within the field is evidence that those skilled in the art considered such problems to be insoluble.***

[When the invention of Duffy 1 was presented in prototype form to the engineering staffs of several (of the aforementioned) major manufacturers in the field, the invention was rejected on the basis that it was too rigid and that it couldn't be readily or economically manufactured --- both problems which are solved by the present invention (documentation unavailable due to confidentiality agreements).]

17. Up to now those skilled in the art never appreciated the inherent advantages of the invention and the problem solved by the invention was never before even recognized.

As per the discussion above it is apparent that, as the field of surface fasteners has evolved, several problems solved by the present invention have not previously been recognized. In particular, the efficient utilization of material, cleanability, and enhanced flexibility provided by the invention's integrated fenestrated structure, as well as other attributes including integral manufacturability, solve problems with prior art that appear to have previously been ignored. *Therefore it is apparent that those skilled in the art did not appreciate the advantages of the present invention.*

18. The invention is contrary to the teachings of the prior art and to the wisdom of the art.

MPEP 2144.04, citing Schenck v. Norton states "insight that was contrary understandings and expectations of the art" are grounds for a finding of unobviousness.

As discussed above, the present invention is contrary to the teachings of Duffy 1 with regard to at least its segmented islands, stems, and fenestrated base structure resultant in its integral structural matrix. It is also contrary to the teachings of Allan with regard to its mechanism of slidingly engaging as well as its inherent structure and numerous other aspects. *It is contrary to the wisdom of the art in regard to at least both of the aforementioned aspects in combination as well as to the particular aspects and objectives previously discussed.*

19. Applicant's invention solves a different problem than the reference and such different problem is recited in the claims.

MPEP 706.02 (j) requires that references must teach or suggest all claim limitations.

In comparison with Allan, independent Claims 1, 12, 33, 34, and 44 each recite a fastening device which is slidingly engaged, whereas Allan teaches a device which is

compressively engaged. Therefore the inventions solve different problems related to their different mechanism of connection.

Furthermore, in comparison with Duffy 1, the present claims recite undercut segments attached by stems to a fenestrated base resultant in a three-dimensional structural matrix, whereas Duffy 1 teaches islands extending from a contiguous sheet form "basal surface". One of the problems solved by the present invention is elimination of the sheet form "basal surface".

Therefore the present invention as claimed solves a different problem than the references.

20. The invention utilizes a new principle

Inclusion of an integral fenestrated structure, comprising segmented islands, stems and a fenestrated base, with a slidingly engaging interlocking mechanism represents a new principle which combines efficiency of material usage with flexibility, cleanability and other aspects previously discussed.

21. The results achieved by the invention are greater than the sum of the respective results of the individual references.

The sum of the respective results of the individual references, if they could be combined, would appear to be either: 1) a slidingly engaging interlocking device with a contiguous sheet form basal surface fenestrated for sewing to a substrate as suggested by the Examiner; or 2) a compressively engaged strap as per Allan wherein the receiving slots are contiguous with a sheet form base. ***In either case, the sum of the combined results would not equal the results achieved by the present invention as enumerated above.***

22. The results achieved by the invention are new, unexpected, superior, disproportionate, unsuggested, unusual, critical, and surprising.

As previously discussed, the results achieved by the present invention include numerous attributes which can not be anticipated by a simple combination of the references as proposed by the examiner, and which are greatly superior to the prior art.

- 23. An element of a prior art reference has been omitted and a reference made simpler without loss, and indeed with gain, of capability.**

MPEP 2144.04 II. B. states, "Omission of an element with retention of the elements function is an indicia of unobviousness".

By fenestrating the base structure in the manner claimed so that undercut segments are aligned with at least part of the fenestrations, a significant portion of the contiguous sheet form base of Duffy 1 has been eliminated and a highly efficient structure is achieved with optimal material utilization, enhanced flexibility, torsional flexibility, enhanced cleanability and hygienic qualities, potential for economic production as well as integral manufacturing, and other qualities. Therefore the reference, Duffy 1, has been made simpler by eliminating a significant part of its structural mass without loss and indeed with significant gain of capability.

Similarly, by eliminating the compressively actuated slot and rail system of Allan, a simpler device is provided without loss and with significant gain as in providing self-alignment, hermaphroditicity, torsional flexibility, and other enhanced aspects only provided by the present invention.

Therefore, eliminating and significantly simplifying aspects of the prior art results in a unique new invention.

- 24. The invention solves a long felt, long existing but unsolved need.**

The field of surface fasteners has long been dominated by hook-and-loop and somewhat more recently mushroom-type fastening systems (Other prior art systems such as that of Allan appear to have had limited application and have not generally be commercially successful). Although significant advances have been made continually in each, the systems still include a number of inherent disadvantages including: 1) shear strength is directly proportional to release pressure, therefore the strength of a releasable system is inherently limited; 2) They tend to clog with lint and debris and can not be readily cleaned; 3) Durability is generally limited due to a combination of the foregoing; 4) They tend to utilize material somewhat inefficiently; 5) They can not be readily molded into a larger product component and generally depend on adhesives or other means of attachment; And they each are limited by inherent aspects of their respective principles of operation and structure.

As thoroughly discussed above, the present invention recognizes and solves a number of inherent problems of the prior art as well as other problems which appear not have been previously recognized, considered or solved.

25. The invention has been recognized by a significant award in a professional publication.

As noted in response # 1 above, a proposed application of the present invention was selected as the Grand Prize winner in the 2004 Emhart/NASA Tech Briefs "create the Future" Contest. *Much of this recognition was related to the inherent aspects of the invention including, in particular, its integral fenestrated structure, as previously discussed.*

26. The invention is classified in a crowded art where even a small step forward should be regarded as significant

As discussed above, particularly with regard to response #14, it is apparent that the field is relatively crowded primarily with improvements and advancements to hook-and-loop and mushroom type systems. *Therefore the present invention, by utilizing both a novel principle of operation and unique integral structural attributes resulting in important advantages, clearly represents a significant advancement in the field.*

27. The Office Action has not presented a convincing line of reasoning as to why the claimed subject matter as a whole, including its differences over the prior art, would have been obvious.

MPEP 706.02(j) states that "the initial burden is on the Examiner to provide some suggestion of the desirability of doing what the inventor has done...either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references".

The Examiner alleges that in looking at the subject matter of each invention "as a whole" it would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine Duffy 1's Interlocking Device with Allan's fenestrated base. The sole "teaching or motivation" put forth by the Examiner as "objective evidence of obviousness" is premised on Allan's suggestion that fenestrations would be useful for sewing and Duffy 1's indication that sewing was disclosed as one means for attaching a fastener portion to a substrate as indicated in one embodiment. In that each reference, including Duffy 1, clearly includes sewing as part of a complete disclosure and further in that sewing in such a manner is not even included or proposed in the present invention, the line of reasoning used by the Examiner does not appear to be convincing.

Furthermore, in arriving at the proposed combination, the Examiner has ignored the unique structural aspects, recited in the claims of the present invention, which include the segmented undercut segments, stems, and the specific geometry of the fenestrated base structure as taught throughout the disclosure. *Therefore the Office Action does not*

present a convincing line of reasoning, especially regarding differences over the prior art, as to why the present invention would be obvious.

28. The finding of the Office Action that the invention would have been obvious to one having ordinary skill in the art at the time the invention was made can only be considered by virtue a strained interpretation of impermissible hindsight.

In light of the foregoing discussion and in accordance with MPEP 2141.02 and with the method of analysis put forth by the courts in GRAHAM v. DEER and RE ANITA DEMBICZAK AND BENSON DEMBICZAK, it is apparent that the conclusion of obviousness put forth can only be made in light of impermissible hindsight.

In that:

- 1) The scope and content of the referenced prior art, when considered as a whole, each appear to provide complete solutions by utilizing distinct structures and operating principles which teach apart from each other (including means for attachment by sewing), and do not contain any objective teaching, suggestion, or motivation that would lead a person having ordinary skill in the art to make the proposed combination;
- 2) The subject matter of the present invention when considered as a whole (which includes undercut segments aligned with at least portions of fenestrations, undercut segments connected to common base structure by stems, stems located between undercut segments, the objectives and results of the invention, and other aspects consistent with the objectives of the invention as discussed above and per the application) results in a solution which can not be achieved by combining the references, and would not have been obvious at the time the invention was made to a person having ordinary skill in the art;
- 3) The wisdom of the art at the time the invention was made teaches away from the proposed combination as well as away from the present invention, furthermore, there is no evidence or suggestion in the nature of the problem to be solved which

would lead one of ordinary skill in the art to the present invention or to combine the references in the manner suggested by the Examiner;

- 4) The proposed reason for combining the references is not taught in the present invention and the references each provide a complete solution for the problem proposed to be solved by their combination;
- 5) Objective evidence of nonobviousness, as further discussed in detail above, includes:
 - a. The claimed invention includes undercut [island] segments and stems (each clearly defined in the specification and drawings) which are not taught or suggested in the prior art;
 - b. The claimed invention includes fenestrations which are spaced from and aligned at least in part with undersides of undercut segments (also clearly defined in the specification and drawings) which are not taught or suggested in the references;
 - c. The present invention proceeds contrary to the accepted wisdom of the art (see MPEP 2145, D. 3.) in that it solves problems previously ignored or deemed unsolvable, eliminates the sheet form base, combines a slidingly engaging operating principle with a three-dimensional structural matrix, and in that it has been recognized by a significant award for so doing;

combining aspects of the references so as to result in the present invention as claimed by one of ordinary skill in the art at the time the invention was made can only be conceived as a result of hindsight in light of the teachings of the present invention.

Regarding Claim 46

The Examiner also has rejected Claim 46 under 35 USC 103(a) as being unpatentable over Duffy 1 in view of Allan as applied to claim 45 above and further in view of Sink (US 5943705) because Sink teaches a strap with non-elastic hook and loop fastener portions at each end of an elastic portion so as to provide an adjustable strap.

Applicant respectfully traverses the Examiners decision on the basis of the foregoing responses 1-28 with regard to Duffy 1 in view of Allan and furthermore as follows:

The combination proposed is not taught or suggested in the prior art references.

Neither Duffy 1, nor Allan, nor Sink contain any teaching, suggestion, or motivation for combining them in the manner suggested by the Examiner.

The references are individually complete.

Each reference teaches a complete and functional invention in itself, therefore there would be no reason to combine them.

The references take different approaches and teach away from each other.

Whereas Duffy 1 teaches a device engaged by a relative shearing force and Allan teaches a device engaged by a relative compressive force, Sink teaches a hook-and-loop device effectively engaged by touch. Therefore each reference takes a mutually exclusive path in arriving at a solution and thereby teaches away from the others.

The combination proposed does not meet the limitations of the claimed invention.

Whereas Sink teaches a hook-and-loop fastener with an elastic segment separating the ends, the product disclosed in Claim 46, dependant on claim 44, specifically includes the limitations of "a slidingly engaging fastener" with "a plurality of undercut segments", "spaced from ... basal surface", "a plurality of stems ... attached to ... base" and with an "undercut segment attached to ... second end and extending away from {the} stem". Such limitations are not found in the teachings, nor suggested by Sink.

It would be necessary to make modifications not taught in the references in order to combine them.

In that each reference teaches a distinct operational principle, significant modifications not taught or suggested in the references would be required to combine the references.

The results achieved by the invention are greater than the sum of the references.

As discussed above, the present invention provides significant advantages (material efficiency, cleanability, torsional flexibility, self -activating engagement, economically manufacturability, integral moldability, etc.) which are significantly greater than the respective results of the individual referenced prior art.

The invention as a whole has not been considered.

The particular limitations of the claim as summarized above are inherent aspects of the invention as a whole, along with other aspects as noted throughout the application and the foregoing response. For instance, as indicated on page 21, line13-16, the elastic segment in this instance is included not only for the common (unclaimed) expedient of providing a stretchable adjustable strap but also for the purpose of providing the relative shearing force necessary to engage the slidingly engaged fastening portions (when the portions are released from an overstretched position). ***Therefore the elastic segment as per Claim 46 is an inherent aspect of the claimed invention when considered as a whole which would not be applicable to hook-and-loop fasteners as in the invention of Sink or compressively activated fasteners as in Allan.***

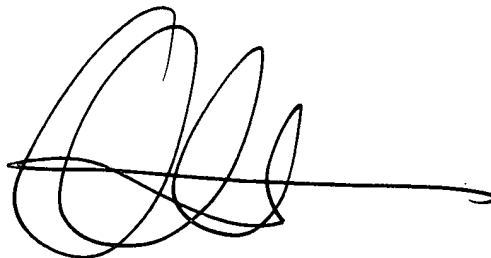
CONCLUSION

In conclusion, the preponderance of objective evidence as provided heretofore clearly indicates that the invention as claimed is not obvious under 35 USC article 103 (a). Therefore the applicant submits that the Specification and Claims are now in proper form for allowance and that the claims all define patentable matter over the prior art.

CONDITIONAL REQUEST FOR CONSTRUCTIVE ASSISTANCE

The Applicant has amended the specification and claims of the application so that they are proper, definite, in accordance with the Examiners prior correspondence, and define novel structure which is also unobvious. If the application is believed to be not in full condition for allowance for any reason, applicant respectfully requests assistance and suggestions from the Examiner as per MPEP 707.07(j) and 2173.02 in order that the applicant can place the application in allowable condition without the need for further proceedings.

Respectfully submitted,

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke extending to the right.

Leonard Duffy, applicant pro se

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Attachments:

Image 1, Image 2, Attachment 1 (NASA Tech Briefs, April 2005)